

Nominee: Asperitas

Nomination title: Immersed Computing

Asperitas has developed two years with an ecosystem of partners both academic and private organisations towards an unique Immersed Computing technology which is enabling sustainable, efficient and flexible datacenters facilitating emerging digital technologies anywhere. Asperitas launched their product portfolio in March 2017 and the team accelerated their development from there as a startup towards a scale up. One year and loads of honors and awards later they have deployed a groundbreaking Immersed Computing datacentre with EcoRacks in the Netherlands. This datacentre is referred to as “the datacentre of the future” which is no surprise looking at the ecosystem of development partners of the unique cleantech solution of Asperitas which includes an aerospace specialized engineering and product design firm. In 2017 one of the largest tech conferences in the world, Websummit, selected Asperitas as one of 33 most exciting startups in their competition which was a unique moment for a datacentre infrastructure technology provider. Leading popular science publication in the Netherlands selected the Immersed Computing as one of the best tech ideas of 2017 and Accenture selected Asperitas as a finalist in their Circular Economy competition. The last competition is illustrative for the Dutch cleantech specialists as they made it their mission to enable not just energy efficient datacenters but transform datacenters into serious circular economy players. Asperitas is taking sustainability or CSR to the next level, already integrating circular principles into the design of their datacentre in a box solution up to assigning resources to develop energy reuse projects with customers and partners. For innovative energy reuse projects they even established a dedicated business unit with one aim only: making unique energy reuse projects a reality.

One year after the launch Asperitas deployed a groundbreaking datacentre in the hightech heart of the Netherlands for a user with extreme high requirements on both energy efficiency and density. Resulting in a dedicated Immersed Computing datahall of 300kw on less than 35 square meters with ten AIC24 systems of Asperitas. This project is often referred to as “the datacentre of the future” because of its simplicity in design and space like looks.

Asperitas made customers their focus already integrated in the design. Their full technology focus was on enabling full flexibility for datacentre users. They have made it a point to remain hardware agnostic and Asperitas continuous R&D activities as mostly customer driven. This resulted for example in an unique high density optimised hardware configuration for Immersed Computing for a customer aiming to deploy a full GPU cluster. This project resulted in a GPU density record of 288 GPU’s in one Asperitas AIC24, being the size of a regular rack but half the height. Already during the development phase end users were central of Asperitas product development focus, Vienna Scientific Cluster (Austrian HPC cluster operator for Universities) was one of the development partners

One major difference, next to the unique Immersed Computing technology, between Asperitas and competitors is the fact Asperitas is collaborating with an ecosystem of partners since the R&D phase. This resulted in a partner ecosystem including hardware manufacturers like Supermicro,



system integrators like Boston and 2CRSI but also energy companies like Eneco and NuonVattenfal, but even other liquid based technology vendors like Usystems. They do this both by building intense collaborations but also within networks like the Datacentre Alliance, Green IT Amsterdam and ETP4HPC.

Why nominee should win

- Asperitas is taking sustainable datacentre development to the next level by developing unique technology and a long term vision on circular economy.
- Their technology development is enabling both green and future proof datacenters for example by stretching high density levels by IT optimization, resulting in a GPU density record.
- Asperitas is evangelizing the transformation not to just their Immersed Computing technology but to make an industry move from air chilled datacentres to liquid based and is known for collaborating with other vendors.
- Asperitas is making it their mission to develop heat reuse reference projects, by establishing a dedicated business unit AsperitasEI (Energy Innovation)